

Date: Thursday, 13/11/2008 1:06:29 PM
User: Julie Dawson

Process Sheet

Customer : CU-DAR001 Dart Helicopters Services Drawing Name : STEM
Job Number : 43422
Estimate Number : 10857
P.O. Number :
This Issue : 13/11/2008 S.O. No. :
Prsht Rev. : NC Part Number : D34073
First Issue : / / Type : MACHINED PARTS Drawing Number : D3407 REV E
Previous Run : 43021 Project Number : N/A
Drawing Revision : E
Material :
Due Date : 05/12/2008 Qty: 40 Um: Each
Written By :
Checked & Approved By : JLD 08.11.14
Comment : Est Rev:A 05.10.18 New issue/ KJ/EC
Est Rev:B Now on Doosan 08-05-14 JLM Verified By:DD
Est Rev:C 08-08-12 revE as per dwg (ecn 08-507) DD verified by:EC

Additional Product

Job Number:



Seq. #:

Machine Or Operation:

Description :

1.0

M174R0750

17-4 round bar .750



Comment: Qty.: 0.3843 f(s)/Unit Total: 15.3720 f(s)

Material: 17-4ph SS Round Bar Ø0.750(M17-4-R0.750)

Identify for D3407-3

Batch: M109478SA 08/12/06?? M105710?? => 54 inches

2.0

DOOSAN LATHE

DOOSAN LATHE



Comment: DOOSAN CNC LATHE

1-Turn as per Folio FA597 Rev: VA & Dwg D3407 Rev: E

2-Deburr

SA 08/12/06(38)(M10)

3.0

QC2

INSPECT PARTS AS THEY COME OFF MACHINE



Comment: INSPECT PARTS AS THEY COME OFF MACHINE

SA 08/12/06(38)(M10)

4.0

QC8

SECOND CHECK



Comment: SECOND CHECK

SA 08-12-09(38)

5.0

PACKAGING 1

PACKAGING RESOURCE #1



Comment: PACKAGING RESOURCE #1

Identify and Stock

Location: CARLSA 08/12/09 (38)

W/O:		WORK ORDER CHANGES							
DATE	STEP		PROCEDURE CHANGE		By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

Part No: D3407-3 PAR #: N/A Fault Category: Prod / Machined Parts NCR: Yes No DQA: D Date: 08/10/12
D3407-043 CD006-640-411/412
 Resolution: SCRAP Disposition: SCRAP QA: N/C Closed: A Date: 08/10/12

NCR: <u>43422</u>		WORK ORDER NON-CONFORMANCE (NCR)						
DATE	STEP	Description of NC Section A	Corrective Action Section B			Verification Section C	Approval Chief Eng	Approval QC Inspector
			Initial Chief Eng	Action Description Chief Eng	Sign & Date			
<u>08/12/08</u>	<u>20</u>	<u>1 part too short on dimensions 4.325, .150 and .150</u> <u>R.C. Incorrect tool offset.</u> <u>operator error.</u>	<u>[Signature]</u>	<u>Scrap and destroy and replace Qty 4</u> <u>B# M107478</u>	<u>SD</u> <u>08/12/08</u>	<u>S</u> <u>08/12/10</u>	<u>[Signature]</u>	<u>S</u> <u>8/12/8</u>
<u>08/12/08</u>	<u>20</u>	<u>1 part scrap. Part accidentally ran twice on 2nd op.</u> <u>R.C. Operator Error.</u>	<u>[Signature]</u>	<u>Scrap and destroy and replace Qty 4</u> <u>B# M107475</u>	<u>SD</u> <u>08/12/08</u>	<u>S</u> <u>08/12/10</u>	<u>[Signature]</u>	<u>S</u> <u>8/12/8</u>

NOTE: Date & initial all entries

Date: Thursday, 13/11/2008 1:06:29 PM
User: Julie Dawson

Process Sheet

Customer: CU-DAR001 Dart Helicopters Services

Drawing Name: STEM

Job Number: 43422

Part Number: D34073

Job Number:



Seq. #:

Machine Or Operation:

Description :

6.0

QC21

FINAL INSPECTION/W/O RELEASE



08/12/08 JF

Comment: FINAL INSPECTION/W/O RELEASE

Job Completion



Wmf 08-12-09

W/O:		WORK ORDER CHANGES						
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector	

Part No: _____ PAR #: _____ Fault Category: _____ NCR: Yes No DQA: _____ Date: _____

Resolution: _____ Disposition: _____ QA: N/C Closed: _____ Date: _____

NCR:		WORK ORDER NON-CONFORMANCE (NCR)						
DATE	STEP	Description of NC Section A	Corrective Action Section B			Verification Section C	Approval Chief Eng	Approval QC Inspector
			Initial Chief Eng	Action Description Chief Eng	Sign & Date			

NOTE: Date & initial all entries

DART AEROSPACE LTD		Work Order: 43422
Description: Stem		Part Number: D3407-3
Inspection Dwg: D3407	Rev: E	Page 1 of 1

FIRST ARTICLE INSPECTION CHECKLIST

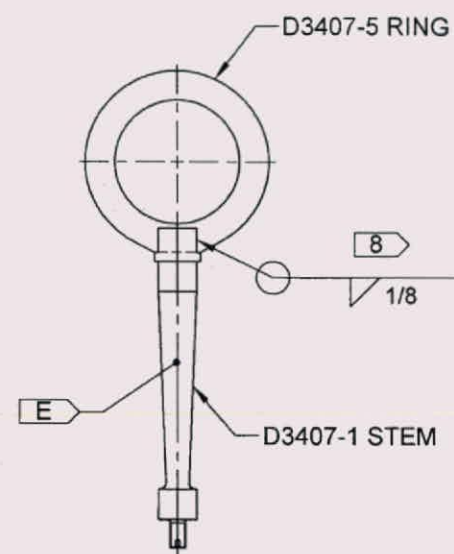
☒ First Article ☐ Prototype

Drawing Dimension	Tolerance	Actual Dimension	Accept	Reject	Method of Inspection	Comments
0.063	+/-0.010	.063	/			
1/4-28 UNF	Max: 0.2668 Min: 0.2635	.265	/			
Major Ø	Max: 0.249 Min: 0.2425	.246	/			
Ø0.625	+/-0.010	Ø.626	/			
Ø0.363	+/-0.010	Ø.360	/			
Ø0.750	+/-0.010	Ø.750	/			
R0.100	+/-0.010	R.100	/			
0.470	+/-0.010	.471	/			
0.250	+/-0.010	.250	/			
2.555	+/-0.010	2.555	/			
3.305	+0.000/-0.010	3.304	/			
4.325	+/-0.010	4.326	/			
0.150	+/-0.010	.151	/			
0.550	+/-0.010	.550	/			
0.625	+/-0.010	.626	/			
0.250	+0.010/-0.000	.255	/			

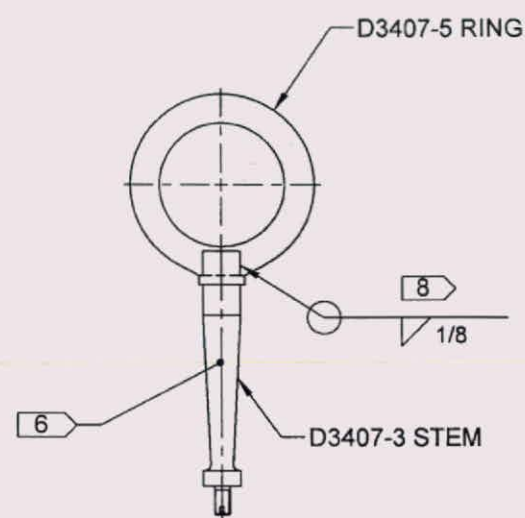
Measured by: SD	Audited by: JLM	Prototype Approval:	N/A
Date: 08/12/06	Date: 08-12-06	Date:	N/A

Rev	Date	Change	Revised by	Approved
A	06.11.08	New Issue	KJ/JLM	
B	07.09.26	Tolerances revised	KJ/EC	
C	08.05.14	Dimensions updated per Dwg Rev D	KJ/JLM	
D	08.10.07	Dimensions updated per Dwg Rev E	KJ/DD	

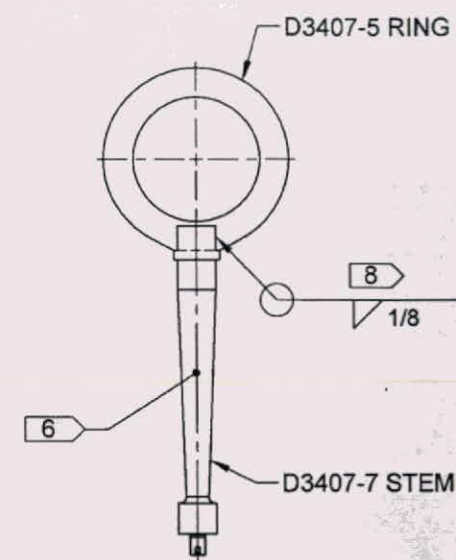
QTY -041	QTY -043	QTY -045	PART NUMBER	DESCRIPTION
X			D3407-041	TOW RING
	X		D3407-043	TOW RING
		X	D3407-045	TOW RING
1			D3407-1	STEM
	1		D3407-3	STEM
1	1	1	D3407-5	RING
		1	D3407-7	STEM



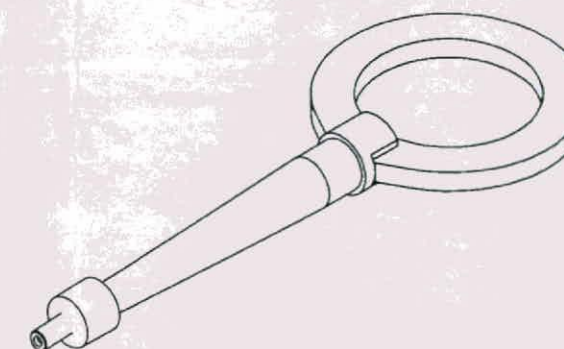
D3407-041 TOW RING



D3407-043 TOW RING




D3407-045 TOW RING



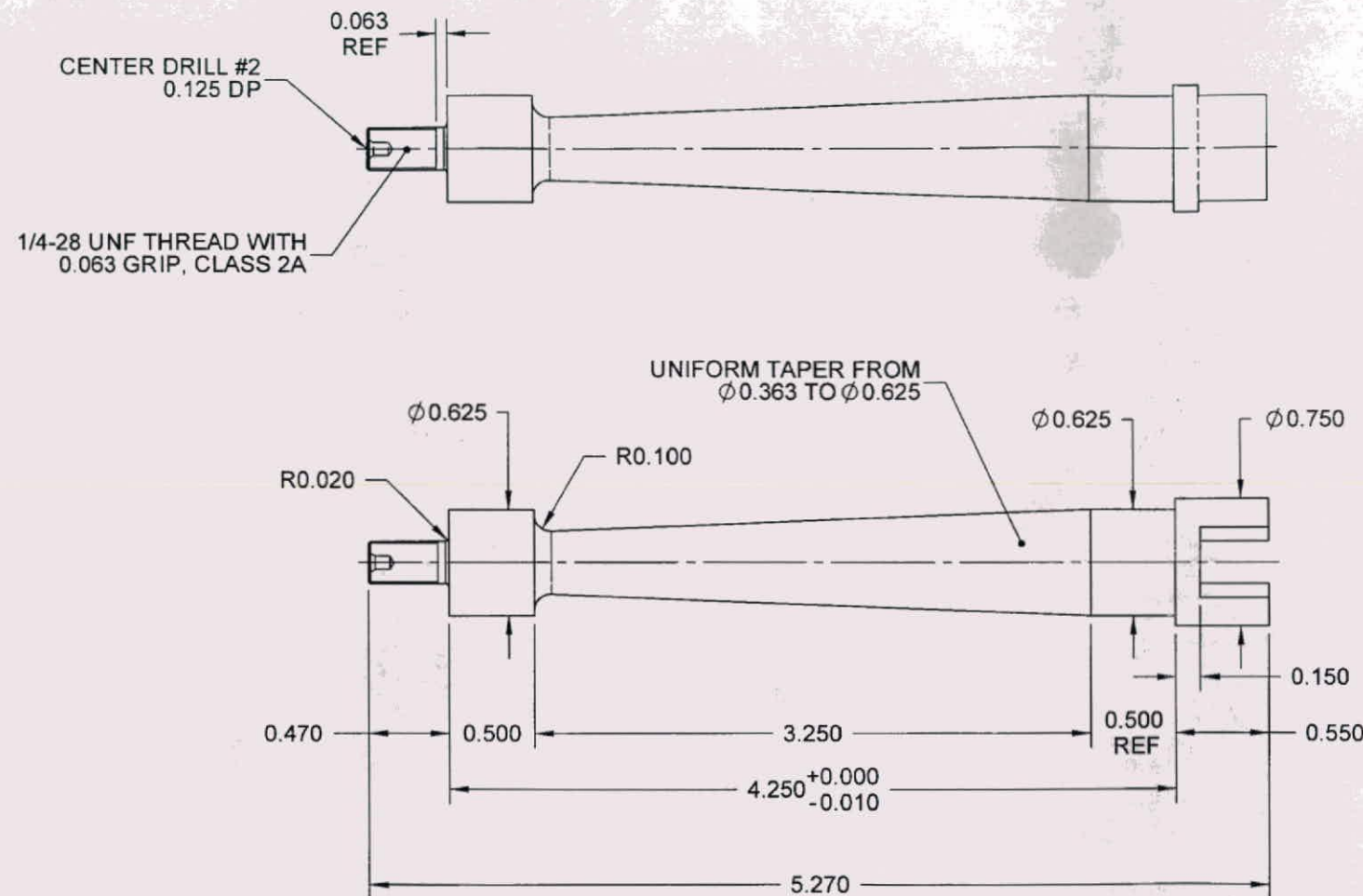
NOTES:

- 1) MATERIAL: N/A
- 2) FINISH: POWDER COAT WHITE (4.3.5.2) PER DART QSI 005 4.3 (EXCEPT THREADS)
- 3) TOLERANCES: PER DART QSI 018 UNLESS OTHERWISE NOTED
- 4) UNITS: INCHES UNLESS OTHERWISE NOTED
- 5) BREAK SHARP EDGES: N/A
- 6) IDENTIFICATION: IDENTIFY WITH DART P/N "D3407-XXX" USING BLACK FINE POINT PERMANENT INK MARKER
- 7) WEIGHT: D3407-041 - 0.60 lbs, D3407-043 - 0.53 lbs, D3407-045 - 0.61 lbs
- 8) WELD PER DART QSI 004 ON ALL EDGES BETWEEN STEM AND RING

E	ADD D3407-045 (ZN B2-1, D8-1); ADD D3407-7 (ZN B6-5); REVISED NOTE 6 TO ADD IDENTIFICATION (ZN A5-1); REASON: PRODUCTION FACILITY	PH	08.07.23
D	D3407-1/-3 SLOT WAS ROUND NOW FLAT FOR ASSEMBLY WITH D3407-5 (ZN C2-2, C2-3); D3407-5 WAS ROUND NOW FLAT ON ONE END FOR ASSEMBLY WITH D3407-1/-3 (ZN B6-4); REASON: PRODUCTION FACILITY	PH	08.04.07
C	-1/-3 LONGER FOR FIT W/WASHER	CP	05.09.09
B	UPDATE DIAMETER, THREAD CLASS ADDED	CP	05.06.17
A	NEW ISSUE	CP	05.03.16
REV.	DESCRIPTION	BY	DATE
DESIGN		DART AEROSPACE USA, INC.	
DRAWN		PORT HADLOCK, WA	
CHECKED		DRAWING NO.	REV.
MFG. APPR.		D3407	SHEET 1 OF
APPROVED		TITLE	SCALE
DE APPR.	TOW RING	NT	
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D3407-1 STEM

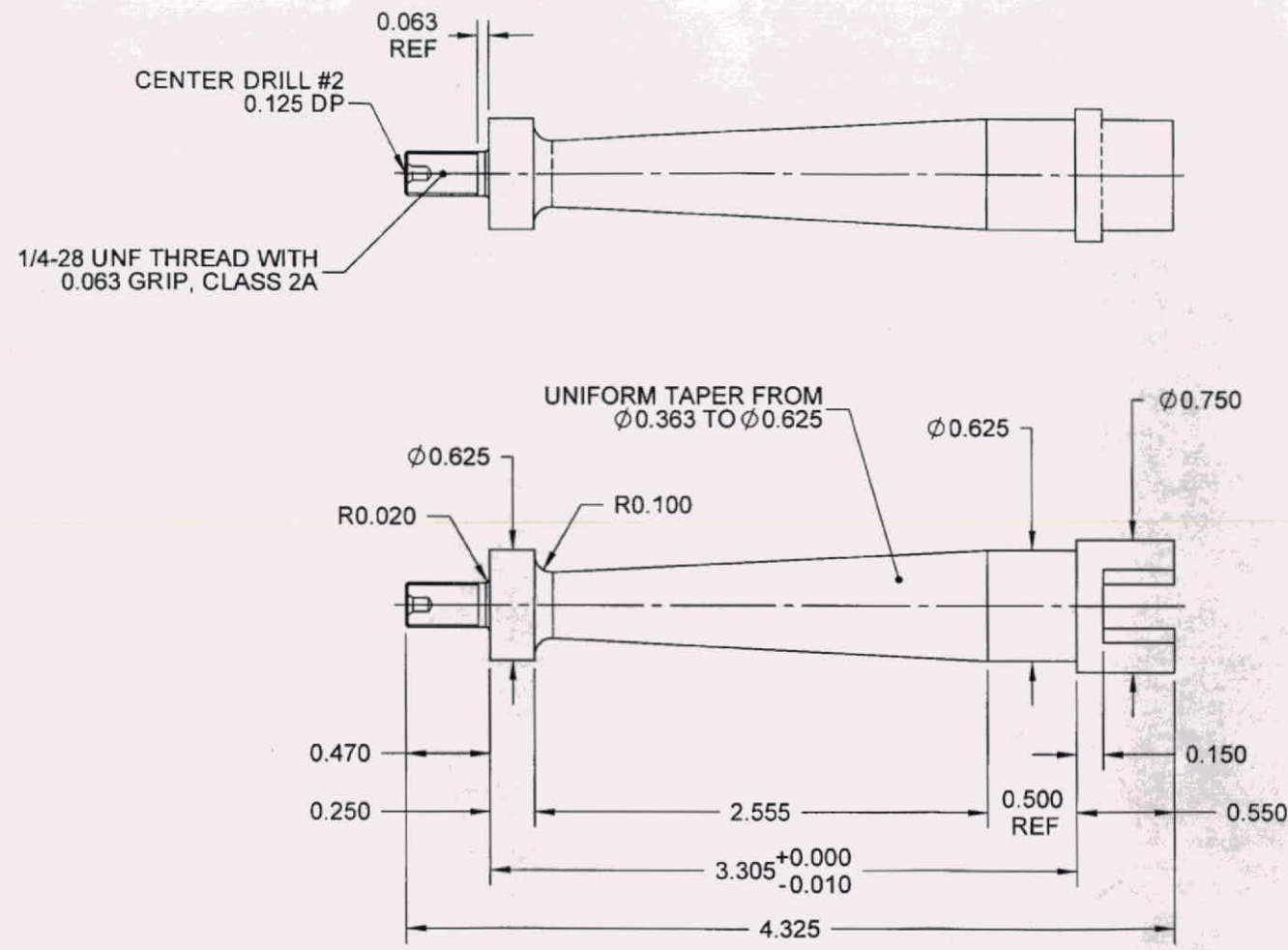
NOTES:

- 1) MATERIAL: 17-4 PH SS ROUND BAR PER AMS 5643 (REF. DART SPEC M17-4-R)
- 2) FINISH: NONE
- 3) TOLERANCES: PER DART QSI 018 UNLESS OTHERWISE NOTED
- 4) UNITS: INCHES UNLESS OTHERWISE NOTED
- 5) BREAK SHARP EDGES: MACHINE ALL INSIDE EDGES WITH A 0.010 RADIUS
- 6) IDENTIFICATION: N/A
- 7) WEIGHT: 0.33 lbs

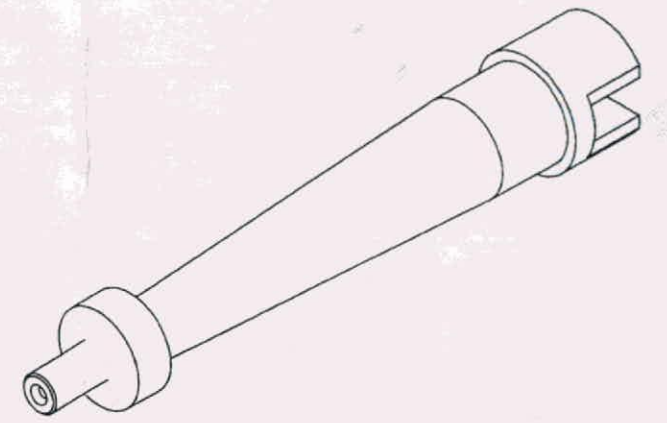
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MFG. APPR.		D3407	SHEET 2 OF 5
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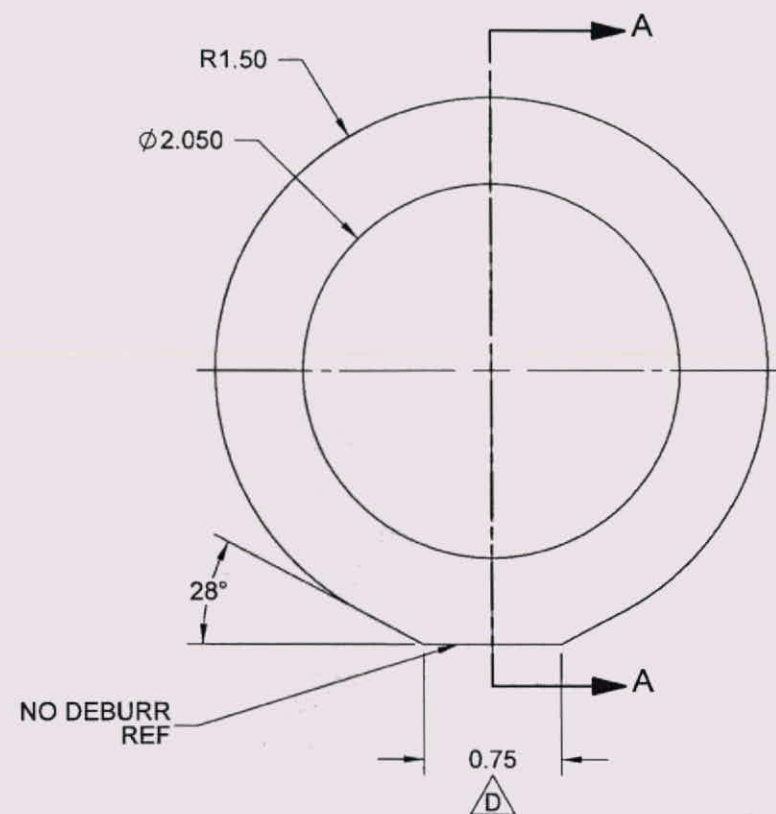
D3407-3 STEM



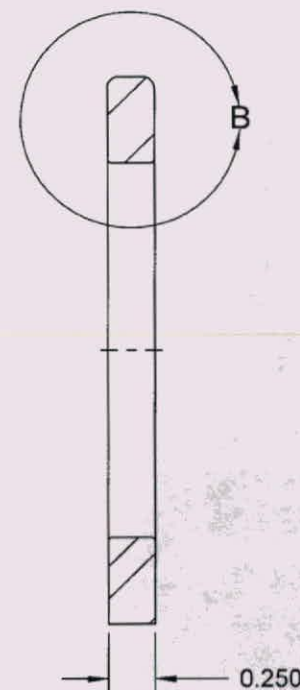
- NOTES:**
- 1) MATERIAL: 17-4 PH SS ROUND BAR PER AMS 5643 (REF. DART SPEC M17-4-R)
 - 2) FINISH: NONE
 - 3) TOLERANCES: PER DART QSI 018 UNLESS OTHERWISE NOTED
 - 4) UNITS: INCHES UNLESS OTHERWISE NOTED
 - 5) BREAK SHARP EDGES: MACHINE ALL INSIDE EDGES WITH A 0.010 RADIUS
 - 6) IDENTIFICATION: N/A
 - 7) WEIGHT: 0.27 lbs

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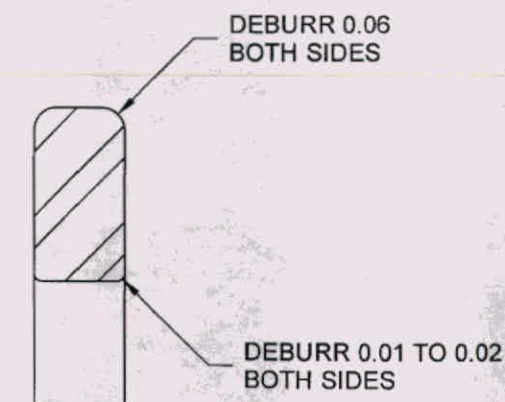
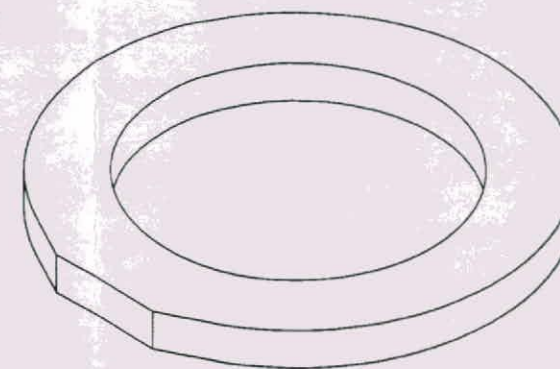
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D3407-5 RING



SECTION A-A



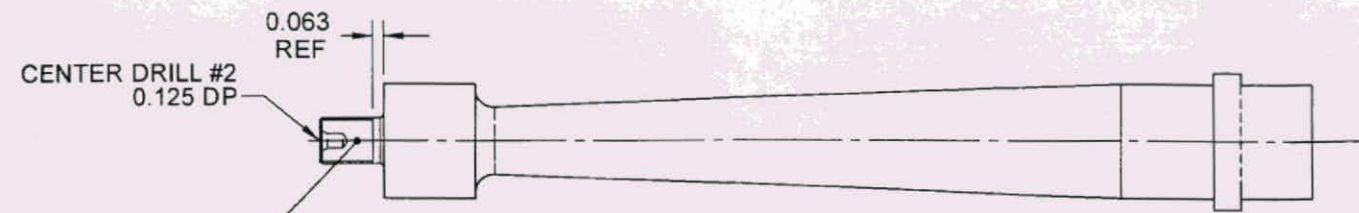
**DETAIL B
SCALE 2X**

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- NOTES:**
- 1) MATERIAL: 17-4 PH SS BAR PER AMS 5604/5643 (REF. DART SPEC M17-4-B)
 - 2) FINISH: NONE
 - 3) TOLERANCES: PER DART QSI 018 UNLESS OTHERWISE NOTED
 - 4) UNITS: INCHES UNLESS OTHERWISE NOTED
 - 5) BREAK SHARP EDGES: N/A
 - 6) IDENTIFICATION: N/A
 - 7) WEIGHT: 0.27 lbs

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0.063
REF

Technical drawing of a shaft with a conical section. The drawing includes the following dimensions and tolerances:

- Left end diameter: $\phi 0.625$
- Left end fillet: R0.020
- First cylindrical section diameter: $\phi 0.625$
- First cylindrical section length: $0.500^{+0.000}_{-0.010}$
- Conical section length: 3.500
- Second cylindrical section diameter: $\phi 0.750$
- Second cylindrical section length: $0.500^{+0.000}_{-0.010}$
- Reference length: 0.500 REF
- Right end flange thickness: 0.150
- Right end flange outer diameter: $\phi 0.750$
- Right end flange inner diameter: 0.550
- Total length: 5.400

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